

MASON NECK NATIONAL WILDLIFE REFUGE
Lorton, Virginia

ANNUAL NARRATIVE REPORT
Calendar Year 1978

NATIONAL WILDLIFE REFUGE SYSTEM
Fish and Wildlife Service
U.S. DEPARTMENT OF THE INTERIOR

MASON NECK NATIONAL WILDLIFE REFUGE

UNITED STATES
DEPARTMENT OF THE INTERIOR

FAIRFAX COUNTY, VIRGINIA

UNITED STATES
FISH AND WILDLIFE SERVICE

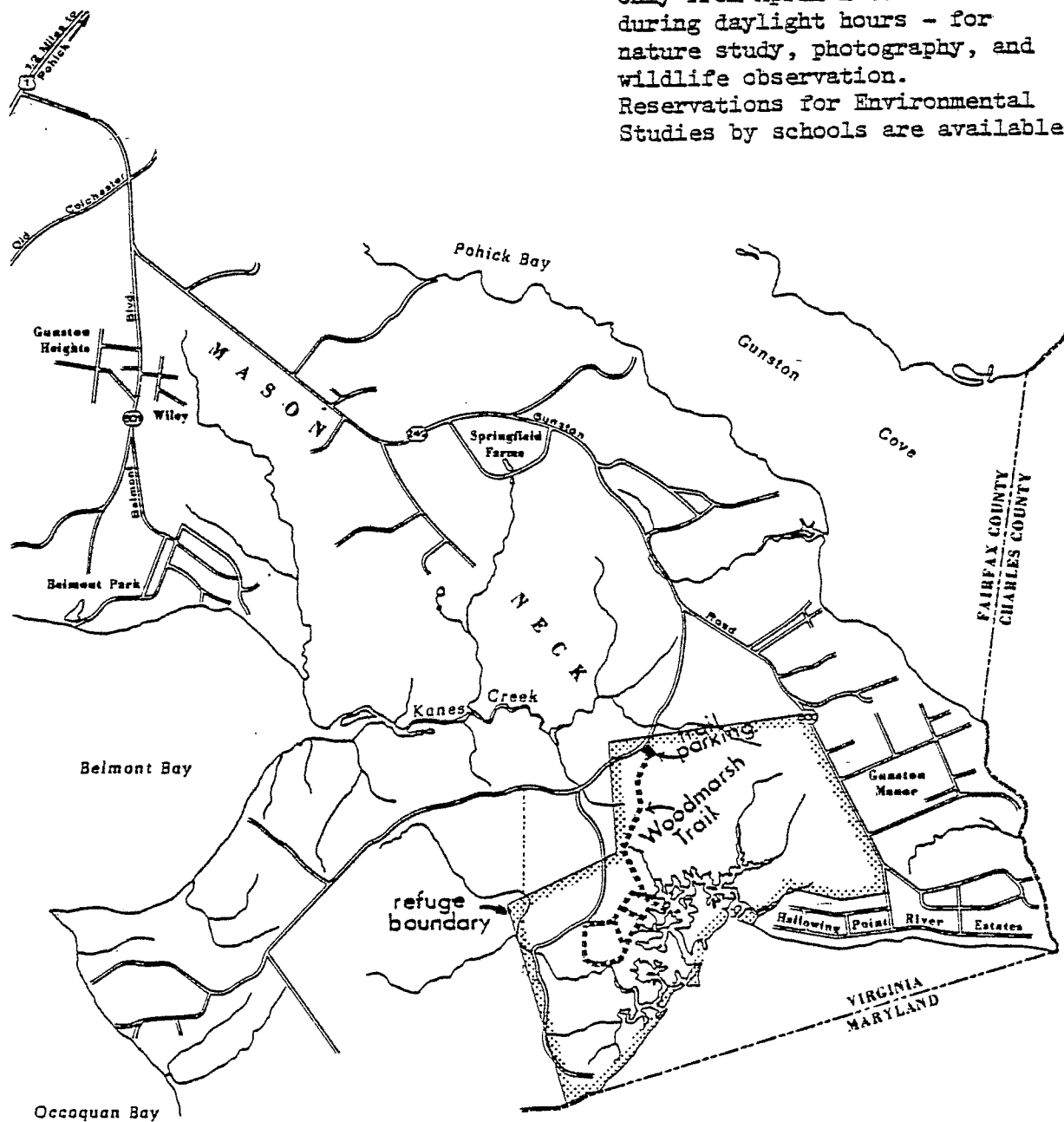
PUBLIC ACCESS

Bald Eagle

The refuge is closed
during critical eagle nesting
period - Dec. 1 to March 31

Public Access Permitted

Entry on foot on Woodmarsh Trail
only from April 1 to November 30
during daylight hours - for
nature study, photography, and
wildlife observation.
Reservations for Environmental
Studies by schools are available.





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Personnel

- | | |
|---|------|
| 1. James M. Williams - Refuge Manager GS 11 (EOD 6/19/78) | PFT |
| 2. Stephen M. Wunderley - Assistant Refuge Manager GS 7 | PFT |
| 3. Electa Lee Pollitt - Biological Aid GS 3 (Terminated
11/19/78) GS 4 (EOD 12/3/78) | Temp |
| 4. Debra S. Green - Refuge Clerk GS 4 | PPT |

Review and Approvals

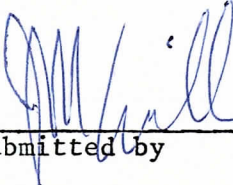
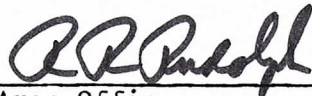


	
Submitted by	Area Office
	
Date	Date
3/26/79	4/3/79
Refuge	Regional Office
	4/9/79

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I. GENERAL

A. Introduction

Bald eagle protection and management play a major role in overall operations of Mason Neck Refuge, the first refuge established specifically for Southern bald eagles. Because of the importance of eagles on Mason Neck, public use is strictly zoned in type, time, and space so as to minimize negative impact on resident and nesting eagles.

Basically the refuge is located on rolling hills, forested with cut-over mixed hardwoods and pine on the shore of the Potomac River about 20 miles downstream from Washington, DC. Requirements for the eagles' life cycle are met by the river and tidal marshes for feeding, the woods for nesting, and the shoreline for loafing and roosting.

The refuge is physically located at the end of Mason Neck (or peninsula) and is surrounded by lands owned for the most part by various public agencies. Gunston Hall, Virginia State Parks, and Northern Virginia Regional Parks all own land on the Neck and cooperate in eagle management efforts, while providing for public use in the least harmful way.

B. Climatic and Habitat Conditions

The winter of 1978 was very cold. The Great Marsh was completely frozen from mid-December 1977 until mid-March 1978. The temperatures for the refuge were well below normal averaging 2.22° below normal from December 1977 until March 1978. February was 5-9° below normal. Precipitation (mostly snow) was heavy this winter. We had a total of 22.1 inches of snow from January to March. Snow was on the ground continuously from January 13 till mid-March. This is an unusual situation since the snow usually melts between snowfalls. A freak storm hit the refuge on January 26. Quantico Marine Base (8 miles south) reported 90 mph gusts and National Airport (12 miles north) reported 70 mph gusts. We had ten trees downed along the two-mile Sycamore Point Road and a culvert under the road was washed out.

Spring arrived March 10th when the cold wave broke. The temperature average March 1-9 was 31.3° and from March 10-31 it was 54.2°. The last day with below freezing temperatures was March 20th. Precipitation for the March-May spring months was slightly above normal; however, the month of April was the driest in 141 years. Most of April's rain came in a single storm the 18th and 19th.

Summer started on the refuge around the middle of June with 91° reading on the 16th. The temperatures for the summer averaged around normal; however, a very unusual cool spell occurred July 2-5 where the temperature did not break 70°. Precipitation during the

summer months averaged slightly above normal but the distribution was erratic. For example, we had some rain every day from July 30 till August 13; then no rain at all until August 27. A similar dry spell was experienced September 1-12.

The fall of 1978 was slightly warmer and drier than usual. October and November were well below normal in precipitation and the first below freezing temperature wasn't encountered until November 2nd. The Great Marsh had many pockets of open water right up to the end of the year. This is in contrast to the previous two years when it was solidly frozen by mid-December.

<u>Month</u>	<u>Precipitation</u> (inches)		<u>Temperatures (°F)</u>			
	<u>1978</u>	<u>Norm</u>	<u>Extreme</u>		<u>Average</u>	
			<u>Max</u>	<u>Min</u>	<u>Max</u>	<u>Min</u>
January	8.7	2.8	63	9	38	22
February	0.4	3.2	51	12	35	20
March	5.3	3.5	80	11	50	34
April	1.2	3.2	87	33	66	42
May	6.8	2.5	87	38	72	53
June	4.9	2.7	91	47	83	61
July	5.0	3.2	96	50	84	63
August	7.3	3.6	92	57	86	69
September	1.2	3.4	91	42	80	60
October	1.4	2.4	85	34	68	44
November	2.3	2.6	76	31	60	41
December	3.1	2.9	76	19	51	31
Total:	47.6	36.0				

C. Land Acquisition

Tract 10f (TNC) has been added to the refuge for the sum of \$56,500. The 14.1-acre tract completes the refuge boundary on State Rt. 600.

One-half interest of the Julia P. Newton Tract (17) remains unpurchased at this time. The interest involved is going through condemnation processing at this time; acquisition is expected in 1979.

Total acreage of the refuge to date is 1,121.18 acres plus half interest of 10 acres. When completed the refuge will total 1,131.18 acres.

The Jan King Evans property (approximately 300 acres) is located on the peninsula next to Service-protected lands owned by Northern Virginia Regional Parks. This property has been scheduled for acquisition by the Regional Parks for the past ten years. The purchase of the tract was finally approved by the Park Board in August. Upon application to the State for matching funds, Virginia

Commission of Outdoor Recreation decided not to fund the project because the land will not be used for recreation. Without matching funds the Park Authority cannot purchase the property.

Messrs. Green and Rudolph, Delmarva Area Office, came out to look over the land and situation. They recommended purchase of the tract to the Regional Office but no word has been received on their recommendation. This tract is the last major inholding within the Mason Neck cooperative eagle management district.

D. System Status

1. Objectives

The Bicentennial Land Heritage Program has had a tremendous impact on refuge planning towards objectives. Objectives do change by simple process of evolution--policies change, priorities change, even demand changes. Consequently, refuge objectives are in dire need of revision in order to properly reflect the direction that BLHP funding is pointing. When instructions are received on how to proceed, approved objectives will be brought into line with current management thrusts.

As far as unofficial objectives are concerned, BLHP has permitted the refuge to work towards improving the Woodmarsh Trail in the hopes of developing a first-rate interpretive facility. BLHP plans for FY 1979 call for major repairs to Sycamore Point Road which will aid in achieving environmental education goals as well as other management and protection objectives related to wildlife.

BLHP has had the additional benefit of enabling the refuge to refine the methods by which we will achieve various objectives. That is, BLHP has done the work of a D&O Plan, which had never been drawn up. So while some refuge objectives need to be changed, we have a much better idea of how we are going to meet those objectives.

2. Funding

The refuge budget for FY 1978 was beefed up to accomodate some much-needed cyclical maintenance. Our major public use facility, the Woodmarsh Trail, was the recipient of a BLHP shot-in-the-arm to upgrade facilities. O&M funds also supplemented the trail rehabilitation project.

The following table shows the refuge funding situation for the last five years.

<u>Fiscal Year</u>	<u>Total Appropriation</u>	<u>Source</u>	<u>Staff</u>
1974	22,000	0116 (SE)	1 PFT 1 PPT 2 TFT

<u>Fiscal Year</u>	<u>Total Appropriation</u>	<u>Source</u>	<u>Staff</u>
1975	31,200:		1 PFT
	17,700	0113 (MB)	1 PPT
	4,000	0115 (SE)	2 TPT
	9,500	0116 (I&R)	
1976	36,000:		1 PFT
	16,000	1210 (MB)	1 PPT
	12,000	1400 (SE)	
	8,000	1500 (I&R)	
T. Q.	14,000:		1 PFT
	4,900	1210 (MB)	1 PPT
	3,000	1400 (SE)	
	6,100	1500 (I&R)	
1977	40,000:		2 PFT
	12,000	1210 (MB)	1 PPT
	16,000	1240 (I&R)	1 TPT
	12,000	1400 (SE)	
1978	64,800:		2 PFT
	18,000	1210 (MB)	1 PPT
	37,500	1240 (I&R)	1 TPT
	9,300	1400 (SE)	
	9,800	BLHP*	
	2,500	Engineering Job Order**	

* BLHP funds for trail maintenance on the Woodmarsh Trail.
Funds were used to purchase materials and tractor.

** Engineering Job Order was for a security compound to be built
on Gunston Road across from Mt. Vernon Boulevard.

II. CONSTRUCTION AND MAINTENANCE

A. Construction

No major construction was done at Mason Neck in 1978. We did, however, receive an engineering job order for \$9,800 to be used for trail rehabilitation. The money was used to buy materials for several boardwalk-style bridges to be placed on the Woodmarsh Trail. YACC labor will be used to install the bridges. A Kubota tractor with front-end loader was purchased to maintain the trail. Mulch for the trail was stockpiled for later use.

Another item which could be considered under construction is the fence that never came. The refuge has a long-felt need for a storage facility on the refuge. Toward the end of the fiscal year, we had saved enough money to cover the installation of a security fence (8' high with triple strand barbed wire on top). The contract was let. The contractor couldn't get a bond. He

defaulted, and we have no fence. Contracting is looking into the possibility of re-letting the contract, so hopefully next year's report will include a new security compound.

B. Maintenance

Since Mason Neck Refuge has relatively few facilities, our maintenance program is a little skimpy. A few on-going projects are worth discussing, however. Refuge signing and posting is a never-ending project. The refuge boundary behind the homes on Chapman Road in Hallowing Point Estates is highly subject to trespass, and was re-posted this year. Posting along Gunston Road and High Point Road required maintenance due to the usual shot-up and stolen signs. With the acquisition of Tract 10f, our boundary on Gunston Road was completed and posting was accomplished to include this tract. An old interior boundary of the refuge (the north side of 10b) was removed at the same time.



They sure crowd our property line at places. I wonder if this qualifies as "boundary shooting."

High Point Road is the only access to the interior of the refuge and is privately owned. This dirt and gravel road is in constant need of repair (possible origin of the term "perpetual care"). This past year we patched holes with stockpiled material as a stop-gap measure since this road will soon serve as access to the Mason Neck State Park. One job that could not be postponed was the replacement of a 20" culvert on refuge section of High Point Road, which was caving in. A new 24" pipe was put in by a contractor. Sycamore Point Road washed out at the place where 48" pipe was replaced last year. The result was the installation of an additional 48" culvert giving us a double culvert now where Raccoon Creek crosses the road.



Maintenance accomplished on the Woodmarsh Trail included clearing deadfalls and downed trees from the trail, reblazing trails with appropriate colored paint, repairing and replacing directional signs, cleaning and maintaining the display shed, and refurbishing display panels. One of the display pannels - the map of the trail done by Steve Sanford in 1975 - was stolen in the fall. No leads in the case were developed by County Police, and the FBI never showed up.

Major repairs were necessary on refuge vehicles and equipment, including major overhauls and minor tune-ups, bodywork, tires, brakes, and ignition system repairs. It seems sometimes that for the money spent on fixing up junk, you'd be better off buying a new one. Fortunately the old Dodge pick-up will soon be replaced. A new pick-up was ordered in FY 1978. The 20 h.p. outboard motor also took its share of money to maintain in operable condition with fuel system/choke problems that seem chronic at times.

III. HABITAT MANAGEMENT

A. Croplands

No farming is done on Mason Neck Refuge with the exception of a marijuana crop discovered in July.

B. Grasslands

No grassland management was done during 1978.

C. Wetlands

No active manipulation of wetlands is done on Mason Neck Refuge. No water control structures exist; however, the beaver dam on Raccoon Creek is providing some good waterfowl habitat behind it.

D. Forestlands

Mason Neck has no management plan for its mixed pine-hardwood forests. The forests are left in a natural state.

E. Other Habitat Management

Nothing to report.

F. Wilderness and Special Areas

Nothing to report.

G. Easements for Waterfowl Management

Nothing to report.

IV. WILDLIFE

A. Endangered Species

The bald eagle population using Mason Neck appears to be on the increase. Eagles (both adults and immatures) were seen irregularly

throughout the summer and in the last part of November at least three adults and four immatures were seen on the refuge. In years past the eagles were very rarely seen from the end of the nesting season in June until January of the next year. Increased enforcement of refuge trespass violations may be a major reason for part of this increase.

The nesting success of our resident pair of eagles had a bizarre outcome this year. An egg transplant was attempted for the second year in a row. Dr. Stan Wiemeyer from Patuxent Wildlife Research Center transplanted two eggs into the active Mason Neck nest and removed one egg. The eagles came back to the nest shortly after the transplant but refused to incubate the new eggs. The "bad" egg was placed in an incubator at Patuxent and subsequently hatched. Unfortunately the young eaglet died two weeks later of pneumonia; however, the eggshell from the "bad" egg was determined to have no thinning, thus it was a relatively uncontaminated egg from pesticides. The reason for this was discovered later when Assistant Manager Wunderley got a close up look at the nesting female. She still had some brown feathers in her head and tail, so she was obviously a new adult--probably her first nesting year. The older, contaminated female had probably died and the male had taken a new mate. Hopefully, this new female will produce viable young for a number of years to come.

In June, Roxey Laybourne of L.E. (Washington) identified some feathers that had been found in an eagle nest which had blown down. The feathers were mostly from a scaup, a few mourning dove feathers, and one great horned owl feather was also present.

In spring 1978, people from the Audubon Society, Audubon Naturalist Society, National Wildlife Federation, and the Washington Endangered Species office spent six weekends on Mason Neck searching for the elusive Bachman's warbler. Bachman's warbler was seen on Mason Neck in 1954 and 1958. The group's quest was unsuccessful.

Assistant Manager Wunderley testified at two public hearings in Westmoreland County concerning the proposed development of the 1,600-acre Schedell property. There are three eagle nests present on this property. The developers eventually withdrew their request.

Refuge Manager Williams met in November with Ben Bolen of Virginia State Parks to discuss eagle management on Mason Neck State Park. Even though the State can't relinquish any proprietary rights on Mason Neck State Park without House of Delegates approval, Manager Williams worked up a cooperative agreement for eagle protection and management which is currently being reviewed by Mr. Bolen.

B. Migratory Birds

Very little open water for waterfowl was present on Mason Neck during January and February due to the extreme cold temperatures. Marumsco Refuge had a population of about 350 mallards at this time due to warm water discharge of an upstream sewage treatment plant.

The migration for all birds was later than usual this year. Egrets, which are usually present on the refuge in late June, did not show up until late August, and then in very small numbers. At the peak of the fall migration this year, Mason Neck had about 3,500 waterfowl, mostly black, mallards, and wood ducks. The fall peak was slightly late, around November 30, probably due to the warm fall weather. A Louisiana Heron was seen by refuge personnel on the refuge in July. This is only the second record of this bird on Mason Neck. Two large flocks of Canadian geese were present during fall migration. While the geese are far from unusual in this area, for some reason the refuge has only hosted isolated pairs in the past.

Refuge Clerk Green and Biological Aid Pollitt cared for four baby wood ducks that were brought to the office by a Woodbridge resident. The mother had apparently been killed by a dog. Other "rescues" included a scaup which was found in a Hallowing Point resident's backyard and an adult red-tailed hawk which had been injured by shotgun pellets.



Baby wood ducks huddled in corner of make-shift brooder in office.



Refuge Clerk Green babysitting for red-tailed hawk.

Assistant Manager Wunderley spent 11 days in Reedville, VA assisting in cleanup operations after a major oil spill there. For further details see VI. B. Cooperative Programs.

The refuge staff participated in two Christmas Bird Counts in 1978. The 1977 count was held on January 2, 1978 and the 1978 count was held December 23, 1978. These counts cover a radius of approximately 15 miles within the Fort Belvoir area of Northern Virginia. The sector which includes the refuge was headed by Mr. Paul DuMont. All data for the area is compiled by Mr. Jackson Abbott.

Data for the 1977 count (held January 1978) is not in the refuge files and is therefore unreported.

During the 1978 count, a few of the counters observed birds not normally seen on the peninsula such as the Gadwall, orange-crowned warbler, Greater scaup, and the sanderling. We ended up the count with 31 different species of birds seen on the refuge.

C. Mammals and Non-Migratory Birds and Others

1: Mammals

During the early part of this year, deer were regularly seen in the pine stand and open areas at the end of Sycamore Point Road. This seemed to be their wintering yard. The harsh winter, poachers, and feral dogs may have decreased the population somewhat, but as spring and summer arrived, many deer were seen throughout

the refuge. During the month of August, fawns were noticed evidencing a successful breeding season. Also with the onset of rutting season at the end of 1978, many healthy bucks were seen.

Since there is very little grassland on the refuge, the presence of a woodchuck on the refuge was of particular interest to the staff. The woodchuck was seen off and on all summer long. We lost track of it at summer's end, at which time fur was found near the burrow.

It is not unlikely that both bobcats and flying squirrels occur on the refuge, although none have ever been seen on our property. One flying squirrel was discovered on Pohick Bay Regional Park, just up the road last summer. Many area residents report seeing bobcats, too, but no sightings or signs have occurred on the refuge.

Fox populations are very high on the Neck and in the area as evidenced by reported trapping success in the vicinity. They appear to be healthy despite their high numbers.

2. Amphibians

No unusual sightings to report.

3. Reptiles

Garter snakes and rat snakes are far the most commonly seen snakes on the refuge. Poisonous snakes are very few and rarely seen. Box turtles continue to be abundant on the Neck.

4. Birds

a. Non-Migratory and Game Birds

Most of the song birds and wood peckers common to this part of the United States are found on Mason Neck. A western tanager was spotted this summer, well out of its normal range.

b. Upland Game Birds

Although wild turkey are known to live in the area and have been seen on the peninsula, none were observed or heard on the refuge this year.

Coveys of bobwhite were seen this summer in the field around the old abandoned house at the end of Sycamore Point Road.

5. Raptors

The most common raptors to Mason Neck are Red-tailed hawk, Red-shouldered hawk, Marsh hawk, osprey, turkey vulture, and of course, the Southern bald eagle.

6. Fish

White perch, carp (large ones), Gar, and striped bass are the main commercial fish in this part of the Potomac River waters. Shad are also present seasonally. No major fish kills occurred on the Potomac this year, though dead catfish were found common on the sandspit all summer long.

V. INTERPRETATION AND RECREATION

A. Information and Interpretation

Three display panels were placed in the exhibit shed describing the life history of the bald eagle, endangered species, and the eagles' place in American heritage. In addition to these, a box for the bird lists to Mason Neck Refuge was placed at the exhibit shed and a box for refuge maps was installed at the trail parking lot.



"Endangered Species" panel displayed at contact station.



"Our Eagle Heritage" panel displayed
at contact station on Woodmarsh Trail.

During this year many local groups visited the refuge for interpretive walks on the trail. These were school groups, scout troops, summer youth programs, and one church youth group. The following is a list of on-refuge tours and programs.

<u>Date</u>	<u>Staff</u>	<u>Group and Number</u>	<u>Activity</u>
2/19/78	Wunderley Green	Northern VA Soil & Water Conservation District Youth Board (15)	Refuge tour
3/28/78	Wunderley	Mrs. Hewitt's Cub Scout den Woodbridge, VA (8)	Refuge tour
4/21/78	Pollitt Green	Kerrydale Elementary (44)	Refuge tour
5/3/78	Pollitt	Mrs. Thompson's 5th-grade Bushell Elementary	Refuge tour
5/11/78	Wunderley Pollitt	Mrs. Hewitt's Cub Scout den Woodbridge, VA (8)	Refuge tour
6/7/78	Wunderley	Fairfax County Summer Program (19)	Eagles on refuge

<u>Date</u>	<u>Staff</u>	<u>Group and Number</u>	<u>Activity</u>
6/7/78	Wunderley	Nokesville Elementary (50)	Refuge tour
6/8/78	Pollitt		
6/17/78	Wunderley	Joe Flakne & Shiloh Baptist Church	Refuge tour
9/27/78	Wunderley	Naylor Road Elementary (16)	Refuge tour
11/4/78	Williams	Girl Scouts from Maryland (11)	Refuge tour
11/18/78	Wunderley	Boy Scouts from DC (12)	Walk sandspit

Boat tours proved to be a popular activity this year. Several tours were conducted for various groups this past year.

Boat Tours of Great Marsh

<u>Date</u>	<u>Staff</u>	<u>Group and Number</u>	<u>Activity</u>
4/14/78	Wunderley Pollitt Green	Audubon Naturalist Society (12)	Photography and wildlife observation
5/6/78	Wunderley Williams	In response to news release (7)	Photography and wildlife observation
8/13/78	Wunderley Pollitt Green	YCC Spike camp (25)	Nocturnal wildlife observation
9/16/78	Wunderley	Vicki Stoelzel of TNC	Photography

Environmental education continues to be a high priority activity at Mason Neck Refuge. During the past year the refuge hosted widely varying levels of environmental education.

Several groups from George Mason University in Fairfax used the refuge as an outdoor classroom. Dr. Bradley's Plant Communities class, Dr. Ernst's Herpetology class, and Dr. Rockwood's Ecology class used the refuge at various times.

An 8th-grade class from Springfield Middle School, St. Mary's County, Maryland visited the refuge early in the fall for a series of activities developed by their teacher, Irvin Smoot. Activities included soil pH, soil temperature, and dissolved oxygen levels. The group was very well behaved and interested in the program.

The QUEST group, sponsored as a summer camp-type activity by the Reston Homeowners' Association, was led on a very fruitful learning expedition by their leader, Russ Tolley, in mid-summer. The sandspit area served as the focal point of their study with discussions of the dynamics involved in its formation. The same group also located new seedlings in the refuge's relict stand of hemlocks on Raccoon Creek.

The YCC camp at Manassas Battlefield National Park spike camped on the refuge while performing work projects. Environmental awareness activities included water quality testing in the Potomac from samples taken on the sandspit. They also took a nighttime excursion by canoe into the Great Marsh to look for nocturnal animals. While one group toured the marsh, another walked along the refuge access road and trail with flashlights covered with red cellophane. At one point the group stopped, hoping to see an animal or two going about its nighttime activities. The rustling of leaves brought all lights in the direction of the noise giving clear view of a striped skunk at short range. The group quickly turned and headed straight back for camp.

The refuge staff also visited schools, local community centers, and the Northern Virginia Soil and Water Conservation District Youth Board to present off-refuge programs. Eagles, refuge management, law enforcement, job opportunities, research, and pond life were among the various subjects covered during this year. A list of these programs is given below.

<u>Date</u>	<u>Staff</u>	<u>Group and Number</u>	<u>Activity</u>
1/18/78	Wunderley	Northern VA Soil and Water Conservation Youth Board (15)	Eagle management and work project.
2/15/78	Wunderley Pollitt	Northern VA Soil and Water Conservation Youth Board (15)	Slide talk on Mason Neck
3/22/78	Pollitt	Kerrydale Elementary (150)	"Pond Life" slide talk
5/30/78	Wunderley	Osbourne Park S.H.School (150)	Career Day
6/8/78	Wunderley	Gunston Manor Citizens' Assoc. (40)	Refuge and eagles
7/24/78	Williams Wunderley Green	Hallowing Point Citizens' Assoc. (8)	Refuge activities
9/29/78	Wunderley	George Mason University and Biology Club (60)	Placement and job opportunities

B. Recreation

Mason Neck Refuge has a walking trail which accomodates a wide variety of people. There are those who are serious bird watchers as well as those out just for a stroll through the hardwood-pine woods and to view Fairfax County's largest marsh. With Pohick Bay Regional Park close by, which has the largest campgrounds closest to Washington, DC, it isn't uncommon to see many out-of-state cars parked in the trail parking lot. The most distant license plate noted this year was from Alaska. Several provinces of Canada were also represented.

Non-wildlife recreation does take place counter to refuge regulations. The major problem is refuge trespass by people on foot and horse.

Consumptive activities in the way of fishing and hunting do occur; but are decreasing due to increased patrolling. We have had greater success this year in controlling illegal activities than previous years.

C. Enforcement

Thirty-nine individuals were apprehended and charged with forty-four violations. Prosecution was declined on two individuals as they were juveniles. Thirteen forfeited collateral, eighteen were tried and found guilty, four were tried and dismissed, and two cases are still pending. Total fines collected during 1978 were \$1,220. The forty-four violations were distributed as follows:

<u>Violations</u>	<u>Cases</u>	<u>Dismissed</u>	<u>Pending</u>	<u>Fines</u>
Trespass	31	4	2	\$825
Fishing without license	3			150
Animal trespass	3			70
Unauthorized fire	2	2		
Introduction of plants (marijuana)	1			25
Aircraft trespass (low alt.)	1	1		
Littering	1			50
Destruction of plant life	2			100
TOTALS:	44	7	2	\$1,220

Two of our "not guilty" cases involved a couple apprehended for trespass and having an unauthorized fire. Even though they pled "technically guilty" and admitted returning to the same closed area of the refuge three or four times since they were warned in October 1977, the judge found them "not guilty" with the comment: "We would be alot better off if the government spent as much time with people as it does with eagles."

Poaching continues to be a major problem on the refuge. However, we have heard from the local grapevine that we have cut this illegal activity drastically since we closed off High Point Road on December 1, 1978. No deer remains were found in 1978 while in 1977 remains of sever carcasses were found.

Trespass is another problem, and in obvious cases the violators are being vigorously prosecuted. High Point Road is the major trespass area, with people driving past a number of "Refuge Closed No Entry" signs. Refuge closure is one of our main eagle management tools. Restricting public access lessens disturbance factors during eagle nesting season and at roost sites.

VI. OTHER ITEMS

A. Field Investigations

1. Deer Population Study

One on-going field investigation was done by Dr. Larry Rockwood, Professor of Ecology, George Mason University, Fairfax County, Virginia. This study was carried out by George Mason University Ecology students with assistance from Manassas Battlefield YCC's and the refuge staff.

Title:

Estimation of the white-tailed deer population at Mason Neck Refuge by the pellet count method.

Objectives:

Determination of deer population, areas and/or habitat favored by the deer, whether the herd needs active management and to introduce a method of large mammal censusing to George Mason University Ecology students.

Results:

The study indicated that there was approximately 0.1 deer per acre. According to Dr. Rockwood any more than this could be considered an over population since the refuge does not have many open areas for browse. The normal population is considered to be .05 to .07 deer per acre.

2. Eagle Nest Study

Mr. Stephen M. Wunderley, Graduate student of George Mason University, has conducted an eagle nest study on Mason Neck but was inactive in 1978. Work on the project was completed in 1977. Only the actual writing of the thesis remains. Results will be included in the narrative report when the thesis is completed.

B. Cooperative Programs

The Northern Virginia Soil and Water Conservation District Youth Board worked for two days in March on the Woodmarsh Trail under a cooperative agreement. They removed brush and reblazed two spur trails.

Assistant Manager Wunderley participated in the oil spill cleanup effort in Reedville, VA. Over 130 birds were eventually released more than two weeks after the spill occurred. Canvasbacks, old squaw, and scaup seemed to be the species that survived the trauma the best.

In October Manager Williams discussed possible projects with Mr. Bob Harney for an upcoming YACC resident camp at nearby Prince William Forest Park (NPS). Mr. Harney was trying to determine the number of projects which might be available to justify their resident camp. Under Secretary Herbst is personally involved with Prince William Forest Park and has expressed his interest to Mr. Harney about interagency cooperation.

The Manassas National Battlefield Park YCC's held a one-week spike camp on the refuge. They cleared one-half mile of environmental education trail on the sandspit, helped clear the underbrush from the Woodmarsh Trail, cleared the ditches along Sycamore Point Road, and established and cleared plots for a deer population study.

C. Items of Interest

1. Personnel

The refuge began the year with the refuge manager position vacant. Assistant Manager Wunderley acted as manager for half the year, until Manager Williams arrived to pick up the reins on June 19. Steve did an admirable job, especially in view of the fact that he had only come on board with the Service the previous September.

Biological Aid Pollitt's temporary appointment expired on November 19. Lee was rehired on December 3, with a grade increase to GS 4 in a new 1040-hour appointment.

Steve was selected for law enforcement training at FLETC, Glynco, GA in January. The training was put to good use, as shown in the number of cases made on the refuge this year.

In March the Harrisburg and Delmarva Area Offices got together for an administrative workshop in Gettysburg, PA. Steve and Debbie, our clerk, attended this three-day meeting.

Manager Williams participated in the Regional Environmental Education Workshop in Concord, MA in September. The refuge is trying to develop a solid environmental education program in the face of curtailed funds for outside trips imposed on the schools by local school boards. The purse strings were tightening even before Proposition 13, so the future of outdoor classroom activities looks dim regardless of how enticing and challenging a program we devise.

Assistant Steve Wunderley received a career ladder promotion in October to GS-7. In November he attended the Raptor Conference/Bald Eagle Workshop in Allentown, PA where some useful information was presented.

2. Refuge Participation

Refuge staff participation in community affairs included the following:

<u>Date</u>	<u>Staff</u>	<u>Activity</u>
5/25/78	Wunderley	Public zoning commission hearing on rezoning the Schedell property - Westmoreland County
6/5/78	Wunderley	Public county supervisors hearing on rezoning Schedell property - Westmoreland County. Rezoning request was withdrawn.
10/16/78	Williams	Public meeting in Fairfax on County Trails System
11/14/78	Williams	Mary Jane Blandford discussed proposed Fairfax County Trails
11/15/78	Williams	Ms. Hartwell and Mr. Ben Bolen (VA State Parks) discussed plans for Mason Neck State Park trails
12/1/78	Williams	Public meeting of Mason Neck residents concerning down-zoning of lands on peninsula
12/9/78	Williams	Public hearing on down-zoning of Mason Neck Peninsula and parts of Fairfax County

The refuge staff also was involved in several meetings concerning a proposed interceptor sewer line from Harbor View Community on the Neck with a pump-over station to the Lower Potomac Plant. The implications of the sewer line proposal were that it would provide

the necessary waste disposal feature needed to develop most of the remaining privately held open space on the Neck, much to the detriment of the eagle management program. The purpose of our presence at these meetings was to manifest our interest in the question without becoming involved in what was essentially a local boondoggee. The proposal was later withdrawn and alternate solutions to the Harbor View problem were found.

3. Credits

Refuge Manager Williams wrote Sections I. A and D, II. A and B, VI. C. and edited the report.

Assistant Manager Wunderley wrote Sections I. B, III. A-G, IV. A and B, V. C, and VI. D.

Biological Aid Pollitt wrote Sections IV. C, V. A and B, and VI. A.

Clerk Green wrote Section I. C and typed the report.

D. Safety

There were three reportable accidents during 1978. Two of which were sustained by Assistant Manager Wunderley, which is why he is writing this section. In the first accident the refuge sedan got stuck on an icy hill at Hidden Pond Park (Fairfax County Parks). After one four-wheel drive vehicle also became stuck trying to free the sedan, another hooked up to it. When the sedan was just becoming free, it slid down the hill into a tree, sustaining damage to the left side of the vehicle.

The second accident occurred while Mr. Wunderley was running back to the YCC spike camp after unlocking the refuge gate. A yellow jacket flew into his mouth and stung his throat and tonsils. Due to the swelling in his throat, he was taken by ambulance to Potomac Hospital where Benedryl was administered. (The yellow jacket didn't even taste good.)

The third accident was sustained by Bio. Aid Pollitt when she stepped on a nail. Lee was pulling nails out of some boards by the Hull House when she disrupted a bee nest. Trying to avoid getting stung, she accidentally stepped on a rusty nail. Lee was sent to her family physician for a tetanus shot.

The refuge staff held monthly safety meetings during 1978. The entire refuge staff also completed an 8-hour course in CPR at Northern Virginia Community College.

MARUMSCO NATIONAL WILDLIFE REFUGE

Narrative Report Summary Calendar Year 1978

I. GENERAL

A. Introduction

Marumsko Refuge is a 63-acre, freshwater tidal marsh located on Marumsko Creek where it empties into Occoquan Bay just downstream from Mason Neck on the Potomac. It lies just across the county line in Prince William County, Virginia, and is administered by Mason Neck Refuge. It has no funding or staff. The refuge was established on lands declared excess by the U.S. Army, and was more or less carved from the Harry Diamond Labs facility. The refuge provides habitat for wintering waterfowl, mostly mallards and black ducks.

B. Climatic and Habitat Conditions

Weather data for Mason Neck Refuge will adequately reflect conditions on Marumsko Refuge since it is less than five air-miles from the center of Mason Neck. Habitat conditions are essentially the same, too, except for the presence of a sewage treatment plant. Warm effluent from the plant helps maintain open water throughout most of the winter. Consequently, the ducks remain longer and even concentrate on this tiny refuge as winter intensifies.

C. Land Acquisition

Marumsko Refuge is a complete refuge. No further acquisitions are planned, unless Harry Diamond Labs decides to relinquish more of its land. If that were to happen, some very nice upland ponds, woods, and grassland could be added.

D. System Status

BLHP has passed Marumsko by entirely. With no funds or staff, and none foreseen in the future, this area is most likely to remain in care-taker status.

II. CONSTRUCTION AND MAINTENANCE

No construction and maintenance was done by refuge personnel on Marumsko this year, with the exception of a posting project.

We did receive some unsolicited and unnecessary help from the County. It seems that Mr. Dennis Bassin took it upon himself to sponsor a goose nesting platform project in our marsh. He evidently had Prince William County YCC's construct 15-20 platforms and place them in the marsh. Geese are not known to use the marsh at all.



III. HABITAT MANAGEMENT

No management of any kind was carried out this year. Patrols of the area were made from time to time.

IV. WILDLIFE

A. Endangered Species

Eagles are known to fly over the refuge area. While the refuge is in a fairly built-up area of Woodbridge, it is entirely likely that eagles do drop in occasionally to harrass the waterfowl concentrations.

B. Migratory Birds

Due to warm effluent, Marumsco Refuge remained open during the severe cold spell early in the year. Up to 350 mallards used the refuge during this period. Wood ducks and mallards were seen throughout the summer months, strong indications of nesting in the area. As fall arrived black ducks, teal, and mallards began showing up in numbers. Marumsco Refuge had not frozen up at year's end and was supporting a transient population peaking at about 600.

Herons and egrets use the marsh to some extent, but never in large numbers. Great blue herons were the most common user this past year. Seagulls were abundant in late fall, using the refuge as a loafing site.

C. Other Species

Muskrat populations appear to be thriving in the marsh, as evidenced by the number of houses built this fall. Deer, which are abundant to over-populated on Harry Diamond, rarely appear on the refuge because of the lack of suitable habitat. No beaver activity has been noted either.

V. INTERPRETATION AND RECREATION

No formal activities are carried out in I&R on Marumsco, but the opportunity exists for an outstanding program to be developed. The refuge sits on the flank of a county park (Veterans Memorial Park) that has even gone to the trouble of laying out a trail overlooking the refuge. We feel guilty about counting these as refuge visits since the people only get on the refuge by trespass. If the marsh could be interpreted to these visitors, the refuge and the NWR System would benefit, not to mention the public.

Enforcement problems at Marumsco center mostly around illegal fishing activities. Bank fishing from the park and boats coming in from the bay are the main source of trouble. The suitability of the water for fishing and the quality of the fish are both questionable.

VI. OTHER ITEMS OF INTEREST

No field investigations are underway at this station. No co-operative programs were carried out this year, and safety is covered under Mason Neck.